



**CONESTOGA-ROVERS  
& ASSOCIATES**

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July 9, 2012

Reference No. 056394

Ms. Sheila Desai  
Remedial Project Manager  
U.S. Environmental Protection Agency – Region V  
77 West Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604-3590

Dear Ms. Desai:

Re: Revised Work Plan for Additional Remedial Investigation Activities  
Former Plainwell, Inc. Mill Property  
Plainwell, Michigan

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## **1.0 INTRODUCTION**

This letter has been prepared to present a Work Plan for Additional Remedial Investigation (RI) activities (Work Plan) at the former Plainwell, Inc. Mill Property (Site) located at 200 Allegan Street in Plainwell, Michigan. Conestoga-Rovers & Associates (CRA), on behalf of Weyerhaeuser Company (Weyerhaeuser), has prepared this document for the United States Environmental Protection Agency (U.S. EPA) Region 5 for review and approval.

On April 20, 2012, Weyerhaeuser submitted a revised RI Report in response to U.S. EPA comments on the RI Report, dated February 17, 2012 and U.S. EPA's November 23, 2011 comments associated with the Human Health Risk Assessment (HHRA) and Screening Level Ecological Assessment (SLERA) portions of the RI and on a subsequent memorandum, entitled *Proposed Modifications to Human Health and Ecological Risk Assessments, Remedial Investigation Report, Former Plainwell, Inc. Mill Property, Plainwell, Michigan*, which was submitted to U.S. EPA on November 9, 2011. The revised RI Report was submitted in accordance with the RI/Feasibility Study (FS) Work Plan dated July 2009, the Multi-Area Quality Assurance Project Plan (QAPP) dated September 23, 2009, the Multi-Area Field Sampling Plan (FSP) dated November 2009, the Phase II RI Work Plan dated November 2009, the Statement of Work (SOW) for the RI/FS, and the terms of the Consent Decree for the Design and Implementation of Certain Response Actions at Operable Unit #4 and the Plainwell, Inc Mill Property of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Consent Decree), which became effective February 22, 2005.

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The revised RI Report provided the following recommendations for additional activities to be completed at the Site:

- Collection of static water levels and staff gauge readings on a quarterly basis to evaluate seasonal fluctuations (i.e., wet versus dry)
- Completion of a round of groundwater samples from existing monitoring wells, with analysis to include amenable cyanide
- Further evaluation of existing monitoring well and staff gauge network and potential installation of additional wells and/or staff gauges
- Development of a strategy to confirm the speciation assumptions for chromium used in the risk assessment
- Abandonment of existing monitoring well MW-1 in support of redevelopment activities associated with utility installation/replacement
- Excavation and verification sampling associated with impacts identified in soil samples from TP-203 in Commercial Area 4 in support of redevelopment activities
- Delineation of PCB impacts in the vicinity of MW-16 in support of redevelopment activities

The Scope of Work (SOW) for this Work Plan has been prepared to address data gaps presented in the revised RI Report and is outlined below. This Work Plan has been revised to address U.S. EPA's comments on the May 7, 2012 submittal, which were received on June 7, 2012, and reflects changes made to address those comments.

## **2.0     SCOPE OF WORK**

The investigations proposed in the following sections will be conducted in accordance with the methods and procedures specified in the Phase II RI Work Plan dated November 20, 2009, as approved by the U.S. EPA on January 19, 2010. Additionally, the SOW includes the laboratory analysis of soil and groundwater samples consistent with the protocols set forth in the Multi-Area QAPP dated September 23, 2009 and the Multi-Area FSP dated November 20, 2009, submitted to the U.S. EPA under separate cover. Where a field methodology is not provided in the above-referenced documents, details on the approach to be taken to complete the SOW have been provided for approval.



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## **2.1 GROUNDWATER/SURFACE WATER ELEVATIONS AND MONITORING**

Groundwater elevations will be measured and recorded in June and September 2012 to further evaluate groundwater flow direction, horizontal hydraulic gradient, and seasonal fluctuation of the water table. Measurements will be obtained from existing on-Site monitoring wells and staff gauges (MW-2 through MW-19 and SG-1 through SG-3). Monitoring well and staff gauge locations are presented on Figure 1. A single round of water level measurements was obtained in March 2012. The March 2012 water level measurements are presented in Table 1. Groundwater contours developed based on the February 2010<sup>1</sup> and March 2012 data are presented on Figure 2 and Figure 3, respectively.

To further evaluate the interaction between Site groundwater and the Kalamazoo River/Mill Race, during the July and September 2012 monitoring events, groundwater levels will be measured every other day (e.g., Monday, Wednesday, and Friday) for a period of 2 weeks. This data will also be used to evaluate the groundwater flow direction during the groundwater sampling event proposed below.

Immediately following the last round of water level measurements from the July 2012 event, a groundwater monitoring event will be completed at the Site which will consist of collection of a groundwater sample from each of the on-Site monitoring wells (i.e., MW-2 through MW-23) for laboratory analysis of Target Analyte List (TAL) metals, amenable cyanide, and general chemistry parameters on a standard 2-week turnaround time (TAT). Monitoring well purging and groundwater sampling will be performed in accordance with acceptable U.S. EPA and Michigan Department of Environmental Quality (MDEQ) low flow purging (LFP) and sampling techniques as outlined in the FSP.

## **2.2 MONITORING WELL NETWORK EVALUATION**

As discussed in the responses to U.S. EPA comments provided with the Revised RI Report (Response to General Comment # 3) and the revised RI Report, it is recommended that the existing monitoring well network be augmented to include deeper (nested adjacent to an existing shallow monitoring well) well screens to evaluate the potential venting to surface water and to supplement the existing known hydrogeologic conditions of the aquifer beneath the Site. In addition, the need for additional monitoring wells where groundwater passes beneath the Site property lines was also evaluated with regard to current and potential future land and resource uses, as appropriate. Based on CRA's review of the hydrogeology of the Site, the

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<sup>1</sup> It should be noted that during preparation of the March 2012 groundwater contours an error in the staff gauge data interpretation for the February 2010 was noted. The error has been addressed and the updated contours presented on Figure 2.



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following additional monitoring wells and staff gauge are proposed to assist with the understanding of the groundwater flow patterns at the Site and the interaction of the Kalamazoo River with the Site groundwater:

- An additional staff gauge (SG-4) near the confluence of the Mill Race and the Kalamazoo River to further evaluate what appears to be the recharge of groundwater in this area
- An additional shallow well in Commercial Area 1 (MW-20)
- Two deep wells, adjacent to existing MW-12 in Residential Area 1 (MW-12D) and existing MW-4 in Mixed Residential/Commercial Area 2 (MW-4D)
- An additional nested well set in Commercial Area 2 (MW-21S/MW-21D)

The proposed locations of the new monitoring wells are shown on Figure 4.

In addition to the proposed monitoring wells to further evaluate groundwater flow conditions, additional shallow monitoring wells downgradient of the coal tunnel (i.e., MW-22) and the 200,000-gallon fuel oil aboveground storage tank (AST)(i.e., MW-23) are proposed to be installed and monitored for potential impacts to groundwater. Originally MW-2 and MW-19 were believed to be a suitable location to monitor groundwater quality downgradient of the coal tunnel and the 200,000-gallon fuel oil AST, respectively; however, groundwater elevation data has confirmed that groundwater flow is in a westerly direction in this area of the Site, and therefore, the proposed locations of MW-22 and MW-23 are better locations to monitor potential impacts to groundwater associated with the coal tunnel and 200,000-gallon fuel oil AST.

Monitoring wells MW-20, MW-21S, MW-22, and MW-23 will be constructed with 7-foot screens set to straddle the water table. Each screen will be positioned such that three feet of the screen is above the water table and four feet of the screen is below the water table. The selection of the screened interval is based on the objective to monitor the water table and provide additional information regarding groundwater flow across the shallow groundwater at the Site.

Monitoring wells MW-4D, MW-12D and MW-21D will be constructed with 5-foot screens set at the top of the underlying native silt and clay, or from approximately 25 to 32 feet below ground surface (bgs), whichever is shallower. The selection of the screened intervals are based on the observed geologic conditions in these areas during previous subsurface investigations and anticipated geology, and maintaining an approximate 10 to 15 feet of separation between the screened intervals of the corresponding shallow/water table wells at each location.

The newly installed monitoring wells will be included in the July 2012 groundwater sampling event and a groundwater sample will be collected from the well for laboratory analysis of Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic



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compounds (SVOCs), PCBs, TAL metals, amenable cyanide, and the general chemistry parameters utilized in the Phase II RI Work Plan on a standard 2-week TAT.

A detailed description of the field methods and procedures to be utilized is provided in the Phase II RI Work Plan and the FSP. All sampling and analysis will be performed in accordance with the procedures outlined above and in a manner consistent with the QAPP.

### **2.3 CHROMIUM SPECIATION EVALUATION**

In response to U.S. EPA's comments on the RI Report and the HHRA, concentrations of trivalent chromium and hexavalent chromium were calculated for each data point using measured total chromium concentrations and the recommended ratio of 1:6 hexavalent chromium to trivalent chromium, as per U.S. EPA Regional Screening Levels User's Guide, November 2011. The RI Report further recommended that a strategy be developed to confirm the speciation assumptions for chromium used in the risk assessment. As a result, CRA has conducted a detailed review of the soil and groundwater data available for chromium from the RI Report and determined that further sampling to confirm the assumption used in the RI Report is not warranted. The following paragraphs outline the rationale for this determination.

Chromium is present in soil samples collected during the RI and historical groundwater samples collected prior to the RI activities. In soil, the maximum detected concentration of chromium (total) is 102 mg/kg in a sample collected from 4 to 6 feet bgs in test pit TP-313. This concentration is below the Generic Residential Cleanup Criteria and Screening Levels established in Part 7 of Administrative Rules, effective March 25, 2011, pursuant to Part 201, Environmental Remediation, 1994 PA 451 as amended (Part 201 Criteria) for hexavalent chromium for all pathways except the protection of drinking water and protection of the groundwater surface water interface (GSI). Therefore, in a worst case scenario, if all of the chromium present in the soil were hexavalent chromium, the concentration in soil is well below the soil criteria in Part 201 for both Residential and Non-Residential soil pathways which are protective of human health (versus protective of groundwater quality) such as Direct Contact Criteria and Particulate Soil Inhalation Criteria. Therefore, the purpose of speciating chromium in soil would be solely to facilitate completion of the risk assessment and not to refine the comparison of data to applicable criteria such as the Part 201 criteria. As a result, the assumption used represents an uncertainty in the risk assessment, which is discussed in the HHRA, but CRA believes this level of uncertainty is acceptable in the context of the HHRA. However, some data relating to chromium speciation may be useful as the project moves forward to help assist with future decision making; therefore, some limited chromium sampling will be completed to further evaluate the 1:6 hexavalent chromium to trivalent chromium ratio assumption used in the HHRA. The samples will be collected from adjacent to the RI sample locations that exhibited the highest chromium concentrations for each redevelopment area as



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follows: Commercial Area 1 – SB-144 (from 7 to 9 feet bgs); Commercial Area 2 – SB-238 (from 8 to 10 feet bgs); Commercial Area 3 – SB-248 (from 8 to 10 feet bgs); Commercial Area 4 – TP-5 (at 6 feet bgs); Waterfront Plaza – TP-301 (from 8 to 10 feet bgs); Mixed Residential/Commercial Area 1 – SB-334 (from 8 to 10 feet bgs); Mixed Residential/Commercial Area 2 – SB-231 (from 0 to 1-foot bgs); Residential Area 1 – SB-116 (from 9.5 to 10 feet bgs); Residential Area 2 – SB-126 (from 7.5 to 9.5 feet bgs); Residential Area 3 – SB-134 (from 1.5 to 3.5 feet bgs); and Residential Area 4 – TP-313 (from 4 to 6 feet bgs). A detailed description of the field methods and procedures to be utilized is provided in the Phase II RI Work Plan and the FSP. All sampling and analysis will be performed in accordance with the procedures outlined above and in a manner consistent with the QAPP.

With respect to groundwater data for chromium and related groundwater protection criteria, it should be noted that during the groundwater sampling activities completed for the Phase II RI, chromium was not detected in any Site monitoring wells (chromium was detected at or slightly above the detection limit in two locations during the groundwater sampling in 2008 and in unfiltered groundwater grab samples only). Therefore, chromium is not a groundwater contaminant of concern for the Site. Moreover, the maximum detected concentration of chromium in soil (i.e., 102 mg/kg) has a corresponding Synthetic Precipitation Leaching Procedure (SPLP) result which is less than the Residential and Non-Residential Drinking Water Criterion and GSI Criterion for hexavalent chromium, which is consistent with other SPLP data from across the Site (there are only five locations where the SPLP data is above Part 201 criteria for either drinking water or GSI). The lack of chromium in groundwater samples collected from the Site and in SPLP results indicates that leaching of chromium to groundwater is not a significant concern at this Site, and therefore, speciation of the chromium in groundwater would provide no additional information to use in decision making related to the RI Report.

## **2.4 ABANDONMENT OF MW-1**

Monitoring well MW-1 is located near the southern Site boundary along Allegan Street within an area planned for storm sewer utility construction and a property entrance off of Allegan Street. The location of MW-1 is presented on Figure 1. Based on U.S. EPA's email approval on March 28, 2012, MW-1 was abandoned in accordance with applicable standards to accommodate utility construction.

MW-1 was abandoned utilizing a 4 ¼-inch hollow-stem auger (HSA) drilling method to total depth of the well (17 feet bgs). All well construction materials including well cover, casing, screen, cement seal, and sand pack were removed and the borehole was filled with cement-bentonite grout placed to the ground surface in one continuous flow by means of a tremie pipe.





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## **2.5 REMOVAL OF IMPACTED SOIL IN AREA OF TP-203**

Test pit TP-203 was installed in the southeastern portion of the Site during RI investigation activities conducted in January 2010. Based on laboratory analytical results for soil samples collected from TP-203, benzo(a)pyrene and arsenic were detected above the Part 201 Criteria for Residential and/or Non-Residential Direct Contact in the soil sample collected from 0.5 to 1.5 feet bgs. Additionally, metals and SVOC constituents were detected in the soil sample collected from 0.5 to 1.5 feet bgs at concentrations above the Residential and/or Non-Residential Drinking Water Protection Criteria (DWPC) and/or GSI Protection Criteria (GSIPC). No contaminants were detected above Part 201 Residential and/or Non-Residential Direct Contact Criteria in the soil samples collected from 2 to 4 feet and 8 to 10 feet bgs in TP-203; however, metals were detected at concentrations above the Part 201 Residential and/or Non-Residential DWPC and/or GSIPC.

TP-203 was installed in an asphalt-paved parking area and removal of impacted soil in this area is proposed to take place concurrent with future parking lot resurfacing activities. It is anticipated that less than 10 cubic yards of soil will be excavated from the area of TP-203 to an anticipated depth of 2 feet bgs and will be transferred to a covered, lined roll-off dumpster pending waste characterization for off-Site disposal. The estimated extent of the excavation is presented on Figure 5. Soils will be examined by a CRA geologist for visual/olfactory evidence of impact, and screened with a photoionization detector (PID), in accordance with the Phase II RI Work Plan.

Verification soil samples were collected from the excavation in accordance with the MDEQ's *Sampling Strategies and Statistics Training Materials for Part 201 Cleanup Criteria* (MDEQ - Remediation and Redevelopment Division, 2002). Seven soil samples, including two floor and four sidewall samples (with one duplicate and matrix spike/matrix spike duplicate), were collected for laboratory analysis for polynuclear aromatic hydrocarbons (PNAs) and TAL metals (not including total or amenable cyanide) based on the detected constituents identified above the Part 201 Non-Residential Cleanup Criteria. Based on the results of the soil samples collected on May 11, 2012, arsenic was present at concentrations above the Part 201 Non-Residential Direct Contact Criteria (DCC). As such, additional investigation in this area is proposed to further delineation the extent of the arsenic impacts prior to further excavation and off-Site disposal. A total of 16 soil borings to a depth of 5 feet below ground surface, which is consistent with the impacts identified in this area previously, are proposed to further evaluate this area, in accordance with the Phase II RI Work Plan. One soil sample will be collected from 2-week turnaround time. PNA and TAL metals analysis is consistent with prior exceedances identified in the impacted materials in this area. A portion of the samples will be submitted on hold to the analytical laboratory, pending the results from initial sample analysis.



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A detailed description of the field methods and procedures to be utilized is provided in the Phase II RI Work Plan and the FSP. All sampling and analysis will be performed in accordance with the procedures outlined above and in a manner consistent with the QAPP.

## **2.6 EVALUATION OF PCB-IMPACTED SOIL IN THE AREA OF MW-16**

PCBs were detected in a soil sample collected from 0 to 2 feet bgs from MW-16 during the RI at a concentration above the Part 201 Criteria and the High Occupancy Area Cleanup Level of 1 part per million (ppm) for bulk remediation waste (without further conditions) set forth in the Toxic Substances Control Act (TSCA). In addition, PCBs were detected in the soil sample collected from 3 to 5 feet bgs at a concentration above the High Occupancy Area Cleanup Level of 1 ppm for bulk remediation waste (without further conditions) set forth in TSCA. It should be noted that the TSCA procedures for self-implementing cleanup have been proposed as a conservation approach to evaluating the extent of potential PCB impacts in this area due to the timing of this work and Weyerhaeuser is not indicating that the TSCA cleanup standard is necessarily applicable in this area.

Based on U.S. EPA's email approval on March 28, 2012, nine soil borings (SB-2016 through SB-2024), including one adjacent to MW-16, and at a maximum of 10 feet to the north, south, east, and west of MW-16, were advanced utilizing Geoprobe™ direct push technology with continuous macrocore sampling. An additional six soil borings (SB-2025 through SB-2030) were advanced 10 feet north and south of the initial borings in those directions. Borings were advanced to 10 feet bgs. The approximate soil boring locations are presented on Figure 4.

Soil samples were collected continuously at 2-foot intervals, logged, examined by a CRA geologist for visual/olfactory evidence of impact, and screened with a PID, in accordance with the Phase II RI Work Plan.

Soil samples collected were analyzed for PCBs. Soil samples collected from the 0 to 2-foot, 2 to 4-foot, and 4 to 6-foot intervals from the borings to the north, south, east, and west of MW-16 (SB-2016 to SB-2024) were analyzed on an accelerated 1-week TAT. Soil samples collected from the 6 to 8-foot and 8 to 10-foot intervals from these borings were submitted to the laboratory on hold, pending the results of the upper intervals. Soil samples collected from the 4 to 6-foot interval and the 6 to 8-foot interval from the boring adjacent to MW-16 (SB-2020) were analyzed on an accelerated 1-week TAT. The sample collected from the 8 to 10-foot interval was submitted to the laboratory on hold, pending the results of the upper intervals. The soil samples collected from SB-2025 through SB-2030 were submitted to the laboratory on hold, pending the results of the initial soil samples. All samples, including Quality Control/Quality Assurance (QA/QC) samples, were collected and analyzed according to the protocols set forth





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in the Phase II RI Work Plan and QAPP. The data was recently received from the analytical laboratory and is currently undergoing QA/QC review and validation.

Upon completion of soil sample collection, each soil boring was abandoned by backfilling the soil boring annulus with bentonite chips to the ground surface and properly hydrating.

Additionally, during the implementation of the soil boring investigation, MW-16 was modified from a stick-up well to a flushmount well, to accommodate on-going redevelopment activities. This was achieved by removing the exterior protective casing and cutting the PVC riser pipe to depth. Subsequent to modification, the top of riser was surveyed, consistent with the Phase II RI Work Plan.

## **2.7 DECONTAMINATION**

Upon mobilization to the Site and prior to drilling commencement, the drill rig and all associated equipment utilized during the abandonment of MW-1 and investigation in the vicinity of MW-16 were thoroughly cleaned using a high pressure, low volume steam wash and inspected. Before initiating drilling at each subsequent location, the drill rig and other associated equipment were decontaminated to prevent cross-contamination. All non-disposable sampling equipment was decontaminated prior to each use by using an Alconox wash, potable water rinse, followed by a deionized water rinse and allowed to air dry.

All generated decontamination water and soil cuttings were visually examined and screened with a PID. All decontamination water, soil cuttings, and well materials from MW-16 were containerized in Department of Transportation (DOT)-approved 55-gallon drums for future characterization and disposal.

Similar procedures will be employed for future excavation and drilling activities.

## **2.8 MANAGEMENT OF INVESTIGATION-DERIVED WASTE (IDW)**

IDW generated during the implementation of this Work Plan will be managed and disposed off Site, consistent with the protocols set forth in the Multi-Area FSP.

## **3.0 ANALYTICAL PROTOCOLS**

Soil and groundwater samples collected will be analyzed for the parameters specified above and in accordance with the procedures described in the Phase II RI Work Plan. All samples,



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including QA/QC samples, will be collected and analyzed according to the protocols set forth in the Phase II RI Work Plan and QAPP.

#### **4.0 ANALYTICAL DATA EVALUATION AND REPORTING**

Upon receipt and completion of data validation in accordance with the QAPP, analytical results for the soil and groundwater samples will be evaluated against the Part 201 Criteria, with the exception of the soil samples collected in the vicinity of MW-16, which will be evaluated against the High Occupancy Area Cleanup Level of 1 ppm for bulk remediation waste (without further conditions) set forth in TSCA and the Part 201 Criteria. As identified above, the TSCA procedures for self-implementing cleanup have been proposed as a conservation approach to evaluating the extent of potential PCB impacts in this area due to the timing of this work and Weyerhaeuser is not indicating that the TSCA cleanup standard is necessarily applicable in this area.

CRA will prepare an addendum to the RI Report to present the data collected during the implementation of the SOW for this Work Plan. The data report will be prepared consistent with the RI format and will provide recommendations/conclusions on any changes to the RI Report conclusions resulting from the data collection activities.

#### **5.0 PROJECT SCHEDULE**

Abandonment of MW-1 and evaluation of PCB-impacted soil in the vicinity of MW-16 were conducted on March 29, 2012, based on email approval from U.S. EPA on March 28, 2012. The excavation and verification sampling activities associated with TP-203 was conducted on May 11, 2012. Upon approval of the remainder of the aforementioned tasks by U.S. EPA, CRA will mobilize and initiate implementation of the above SOW.



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Should you have any questions or require any additional information, please do not hesitate to contact the undersigned. The RI Report addendum will be submitted to U.S. EPA 2 weeks following the September 2012 groundwater water level monitoring event.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Gregory A. Carli, P. E.

GAC/JQ/ds/8/Pwl.

Encl.

cc: Paul Bucholtz (MDEQ) - three hard copies  
Jim Saric (U.S. EPA) - electronic only  
Leslie Kirby-Miles (U.S. EPA) - electronic only  
Erik Wilson (City of Plainwell) - electronic only  
Richard Gay (Weyerhaeuser) - electronic only  
Joe Jackowski (Weyerhaeuser) - electronic only  
Martin Lebo (Weyerhaeuser) - electronic only  
Michael Erickson (Arcadis) - electronic only  
Dawn Penniman (Arcadis) - electronic only  
Garry Griffith (Georgia-Pacific, LLC) - electronic only  
Jeffrey Lifka (Tetra Tech) - electronic only  
Jennifer Quigley (CRA) - electronic only



Nº	Revision	Date	Initial

**LEGEND**

- PROPERTY BOUNDARY
- TREE LINE
- FENCE LINE
- RAILROAD
- SURFACE WATER
- FORMER FEATURE
- MW-5 MONITORING WELL LOCATION - PHASE I & II RI
- SG-3 STAFF GAUGES

**SCALE VERIFICATION**

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS		
Status	Date	Initial

**FORMER PLAINWELL, INC. MILL PROPERTY**

**PLAINWELL, MICHIGAN**

**MONITORING WELL AND STAFF GAUGE LOCATIONS**

**CONESTOGA-ROVERS & ASSOCIATES**

Source Reference:

Project Manager: J. QUIGLEY	Reviewed By: G. CARLI	Date: MAY 2012
Scale: 1:150	Project N°: 056394-05	Report N°: DESA008
		Drawing N°: figure 1



N2	Revision	Date	Initial



LEGEND

- PROPERTY BOUNDARY
- TREE LINE
- FENCE LINE
- RAILROAD
- SURFACE WATER
- FORMER FEATURE
- MW-5 MONITORING WELL LOCATION - PHASE I & II RI
- SG-3 STAFF GAUGES
- 713.2 GROUNDWATER CONTOUR
- 712.23 GROUNDWATER ELEVATION

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.



Approved

DRAWING STATUS

Status	Date	Initial

FORMER PLAINWELL, INC. MILL PROPERTY

PLAINWELL, MICHIGAN

WATER TABLE SURFACE (FEBRUARY 2010)

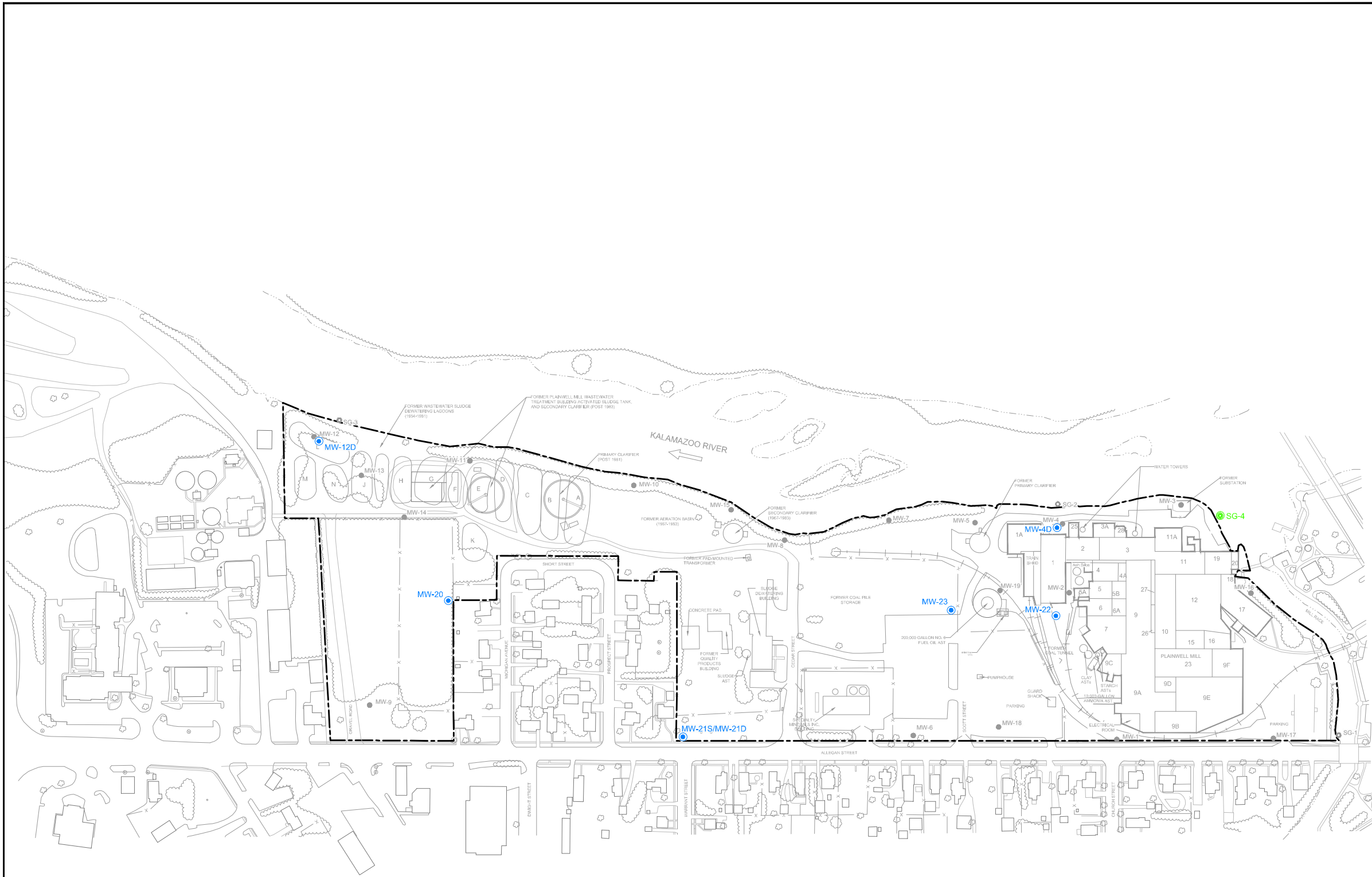


Source Reference:			
Project Manager:	Reviewed By:	Date:	
J. QUIGLEY	G. CARLI	MAY 2012	
Scale:	Project N#:	Report N#:	Drawing N#:
1:150	056394-05	DESA008	figure 2

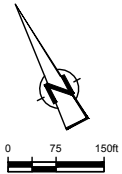








Nº	Revision	Date	Initial




- LEGEND**
- PROPERTY BOUNDARY
  - TREE LINE
  - FENCE LINE
  - RAILROAD
  - SURFACE WATER
  - FORMER FEATURE
  - MW-5 MONITORING WELL LOCATION - PHASE I & II RI
  - SG-3 STAFF GAUGE LOCATION
  - MW-20 PROPOSED MONITORING WELL LOCATION
  - SG-4 PROPOSED STAFF GAUGE LOCATION

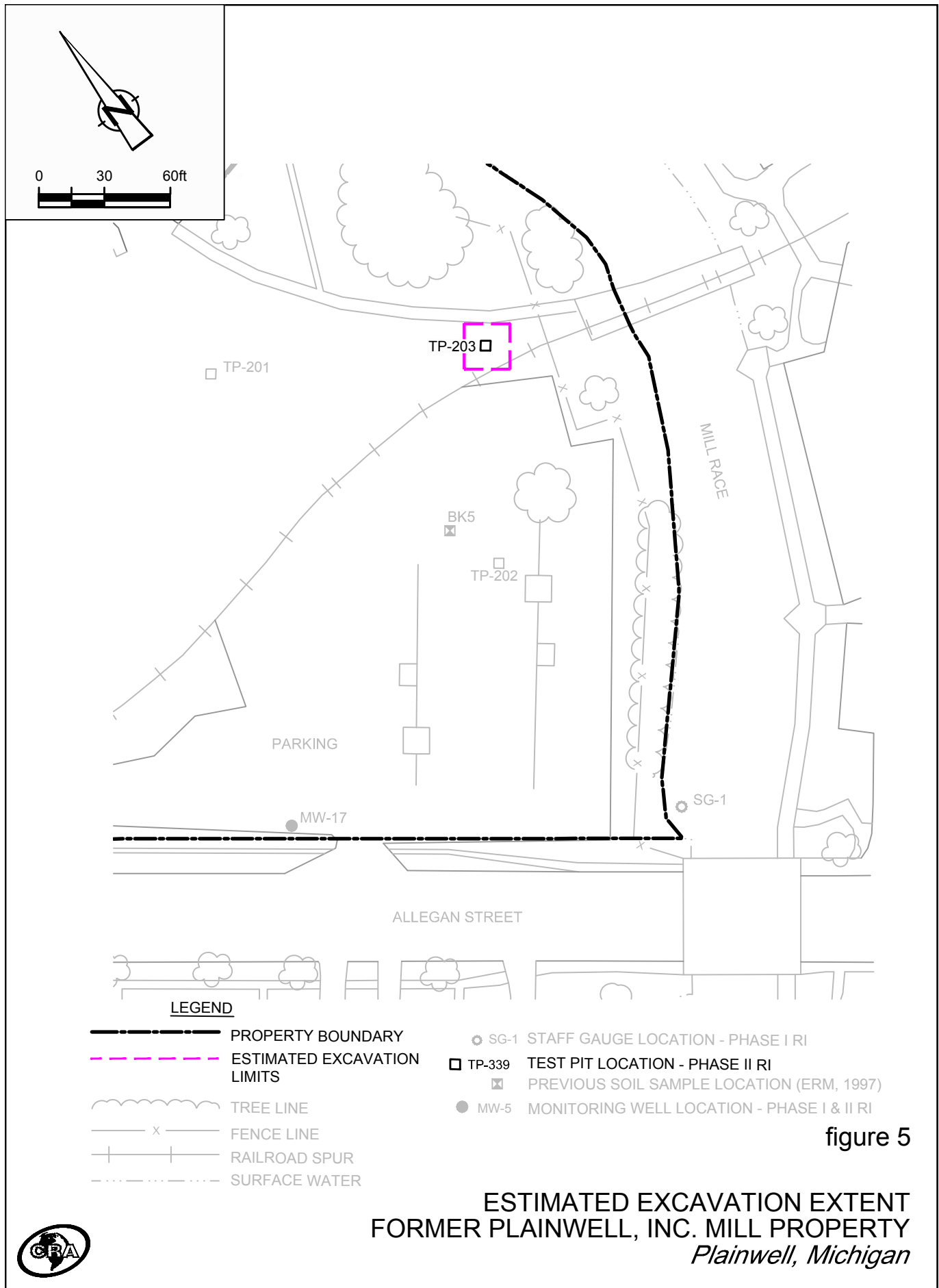
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Approved	
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DRAWING STATUS		
Status	Date	Initial

FORMER PLAINWELL, INC. MILL PROPERTY
PLAINWELL, MICHIGAN
PROPOSED MONITORING WELL AND STAFF GAUGE LOCATIONS

 <b>CONESTOGA-ROVERS &amp; ASSOCIATES</b>			
Source Reference:			
Project Manager:	Reviewed By:	Date:	
J. QUIGLEY	L. CLARK	MAY 2012	
Scale:	Project Nº:	Report Nº:	Drawing Nº:
1:150	056394-05	DESA008	figure 4



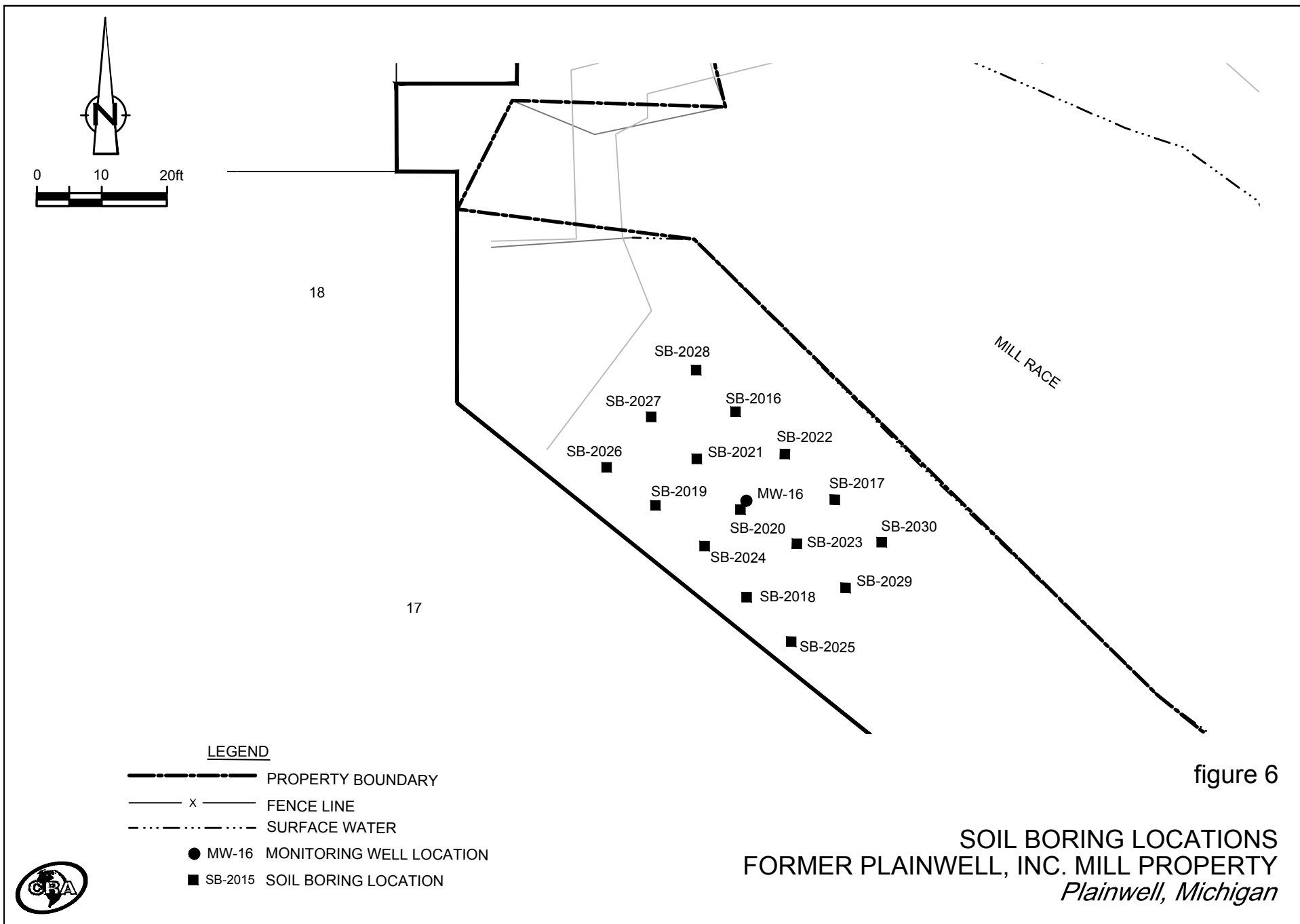


figure 6



TABLE 1

**MARCH 2012 GROUNDWATER ELEVATIONS  
FORMER PLAINWELL, INC. MILL PROPERTY  
PLAINWELL, MICHIGAN**

<i>Location</i>	<i>Elevation of Top of Riser</i>	<i>March 30, 2012</i>	
		<i>Depth to Groundwater <sup>(1)</sup></i>	<i>Groundwater Elevation <sup>(2)</sup></i>
MW-1	728.00	14.55	713.45
MW-2	729.74	16.41	713.33
MW-3	720.63	6.56	714.07
MW-4	722.10	8.77	713.33
MW-5	723.14	10.05	713.09
MW-6	727.00	14.28	712.72
MW-7	721.71	9.51	712.20
MW-8	722.61	10.33	712.28
MW-9	725.46	13.89	711.57
MW-10	727.92	16.02	711.90
MW-11	723.95	12.30	711.65
MW-12	722.50	11.20	711.30
MW-13	722.53	11.00	711.53
MW-14	723.35	11.77	711.58
MW-15	721.70	9.60	712.10
MW-16	727.32	10.53	713.85
MW-17	726.81	12.85	713.96
MW-18	727.68	14.70	712.98
MW-19	725.89	12.78	713.11
SG-1	719.99	1.17	718.82
SG-2	716.66	2.70	713.96
SG-3	713.33	2.45	710.88

## Notes:

<sup>(1)</sup> Depth to Groundwater is feet below top of riser<sup>(2)</sup> Groundwater Elevation is feet AMSL

AMSL - Above Mean Sea Level